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ABSTRACT

The paper describes the Coping Inventory, an observation instrument that provides an index of handicapped children's adaptive behavior by assessing the behaviors and skills they use to meet their own needs and adapt to the demands of their environment. Coping is defined as an active, adaptive process of using strategies to manage one's world. Coping effectiveness is assessed on a continuum from adaptive to maladaptive. The inventory assesses 48 coping behaviors and identifies coping style along three bipolar dimensions: nonproductive-productive, passive-active, and rigid-flexible. The inventory can be divided into the categories of coping with self and coping with environment. Examples and supportive technical data are presented to show how the Coping Inventory can be used for educational and therapeutic planning. (DLS)

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Assessing Coping Behavior

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Abstract

This workshop describes the Coping Inventory, an observation instrument based on Lois Murphy's longitudinal study of children's coping behavior. It is used to assess 48 coping behaviors and develop a profile to be used for educational and therapeutic planning. Examples and supportive technical data are given.

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Assessing Coping Behavior in Handicapped Children

Shirley Zeitlin, Ed.D.

Most children with handicapping conditions share a common problem: maladaptive coping behavior. They, like adults, are continuously coping with the routines and stresses that are part of daily living. To help them, it is necessary to identify, assess and teach those behaviors or skills which are most related to adaptive coping.

This workshop describes the Coping Inventory, an observation instrument which is used to assess the behaviors and skills a child uses to meet his own needs and to adapt to the demands of his environment. Analysis of a child's coping competence provides information about his resources, vulnerabilities, and general coping style. The resulting score is an index of adaptive behavior.

The Coping Inventory is used for educational and therapeutic planning and to help determine the appropriate placement of the marginal child in school. It is also used to generate goals and objectives for more adaptive behavior in the Individual Educational Programs (IEP) required by PL94-142.

When the Coping Inventory is used by people who have a continuing relationship with the child, such as teacher or parent, observation is informal over time. For research and other more vigorous data collection, a minimum of 3 observations of at least ten minutes each at different times of the day and on different days are used. With experience, rating and scoring the Coping Inventory takes, on the average, about one half hour.

The items in the Coping Inventory are rated on a scale of one to five. A score of 1 is given where there is no or very minimal evidence of competency. A score of 5 is given when the behavior is effectively demonstrated.

A situation in a preschool program for handicapped children is adapted to show how an item might be rated. The item is in the category, Coping with Self, the dimension is Productive.

Child, when presented with a situation or learning that is different, difficult or challenging solves the problem or finds a way of handling it.

Coping is defined as an active, adaptive process of using strategies to manage one's world. It is behavior learned from the interactions of the child's development, temperament, prior experience, general level of competence, areas of vulnerability and the demands of the environment.

Coping effectiveness is assessed on a continuum from adaptive to maladaptive. Adaptive coping behavior is behavior which is appropriate to the environment or situation and/or enhances efforts to care for oneself. It generates learning that can be generalized to new situations.

Maladaptive behavior interferes with new learning, increases vulnerability and may generate excessive stress. To reduce the stress the child often engages in defensive or regressive behavior. Maladaptive behavior may also be behavior that is too passive to generate the optimal involvement or stress necessary for learning.

Lois Murphy[3] and her colleagues at Menninger Clinic conducted an eighteen year longitudinal study of children's coping behavior. Factor analysis of the observational data identified two major categories: coping with the environment and coping with self. Coping with the environment is defined as "the capacity to cope with opportunities, challenges, frustrations and threats in the environment." In other words, it is how the child adapts to his environment. Coping with self is "the capacity to manage one's relations to the environment so as to maintain integrated functioning (this contrasted with vulnerability)." It is how the child meets his own survival and growth needs.

Coping style is the way one habitually manages his world by using certain strategies rather than others. Through his experiences each child develops his own unique coping style.

Coping strategies are specific behavior sequences, however simple or complex, used to deal with specific challenges or problems.

Three bipolar dimensions are used to describe coping style: non-productive-productive, passive-active, and rigid-flexible. Productive behavior competently uses personal resources, is capable of producing desired results, is ego gratifying and is socially responsible. Active behavior initiates and sustains action. Flexible behavior utilizes a variety and range of strategies, and demonstrates the capacity to shift plans or to reformulate ideas already held.

Based on these definitions the Coping Inventory is divided into the two categories - Self and Environment. In each category are the three dimensions: Productive, Active and Flexible. A total of 48 items are observed and assessed.

These items were derived from Murphy's study of coping, Chess and Thomas'[6] study of temperament, Burton White's[7] study of competency in the young child, Piaget's theories of cognitive and moral development and Coelho's[1] and Haan's[2] work on coping behavior.

When the Coping Inventory is used by people who have a continuing relationship with the child, such as teacher or parent, observation is informal over time. For research and other more vigorous data collection, a minimum of 3 observations of at least ten minutes each at different times of the day and on different days are used. With experience, rating and scoring the Coping Inventory takes, on the average, about one half hour.

The items in the Coping Inventory are rated on a scale of one to five. A score of 1 is given where there is no or very minimal evidence of competency. A score of 5 is given when the behavior is effectively demonstrated.

A situation in a preschool program for handicapped children is adapted to show how an item might be rated. The item is in the category, Coping with Self, the dimension is Productive.

Child, when presented with a situation or learning that is different, difficult or challenging solves the problem or finds a way of handling it.

Laura is playing with a toy telephone, Matthew comes up and takes it away.

A score of 1 is given if Laura usually cannot handle situations like this. An example is: she just stands watching him until he leaves the area. Then she begins to play with the telephone again. Or she may stand back with an angry and hurt expression on her face, but does not initiate any behavior to get the telephone back again until Matthew leaves.

A score of 2 is given when there is no consistent pattern. Laura rarely uses the same behavior twice for handling situations. Her behavior has a trial-and-error quality about it. For example, sometimes she may stand back and let Matthew play with the phone while other times she grabs it back shouting, "It's mine. I was playing with it." She may start a behavior but not follow through.

A score of 3 is given when the behavior varies with the situation. Laura is unable to generalize her learning from one experience to another. For example, she functions effectively in many free play situations, but when the unexpected happens or new challenges are given in a structured learning experience she acts out or tries to avoid involvement.

A score of 4 is given if Laura can more often than not handle different situations. For example, most of the time she solves the described problem with Matthew in a constructive way. For example, she goes to the teacher and says, "Miss Dea, Matthew took away my telephone and I want it back." However, on occasion she may use a maladaptive behavior for resolving the situation, such as crying or lashing out.

A score of 5 would be given if Laura can usually handle most new, different or difficult situations. For example, when Matthew takes the telephone away, Laura says, calmly, "Matthew, I was playing with the telephone. You go away." A score of 5 would be given even if Laura once in a while had trouble solving a problem, if she took a long time to solve it or if she asked for help from an adult.

The items are scored and a profile is developed. The Adaptive Coping Index summarizes the child's coping competence on the same continuum from maladpative (1) to adaptive (5).

Interpretation of the score is based on the meaning of the ratings.

Some examples are:

An Adaptive Behavior Index of 1.7 indicates minimal competence or maladaptive coping behavior with some behaviors used randomly and mostly ineffectively.

An index of 3.2 indicates developing competence with effective coping in some situations but not others.

An index of 4.1 indicates functional competence; more often than not coping is effective.

The interpretation of the scores in each category (Self - Environment) and dimension (Productive, Active, Flexible) is also based on the meaning of the ratings (1-5).

Figure 1 is a profile of Billy, a five year, five month old boy in a special education program. His problem is that his coping behavior is inconsistent and tends to be maladaptive. He is rigid in coping with his own needs and tends to be passive and non-productive in coping with the environment.

To help Billy cope more effectively his most adaptive behaviors are capitalized on to help him become more competent in his least adaptive behaviors.

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Insert Figure 1

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Figure 2 is a profile of Tom; a ten year, ten month old child in a school for children with severe emotional difficulities. His problem, like Billy's is that he lacks consistent adaptive coping behavior. Tom copes more effectively with the environment than with his own needs. His greatest problem is his rigid non-productive behavior in meeting his own needs.

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Insert Figure 2

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The Coping Inventory is based on non-normative data. Variability in coping competence is not related to typical developmental patterns. For example, age is not a critical variable. The expectation is that a ten year old child will not necessarily have a higher score than a five year old. There are both adaptive and maladaptive copers in each group. The differences in the coping behavior among age groups and other types of groups may be in the context of the behavior rather than in the formal characteristics.

The Coping Inventory can be used to identify differences (if any) in patterns and types of coping behavior between specific groups, for example handicapped and non-handicapped children, children with one type of handicap as compared to another, ethnic groups, etc.

Reliability of the Coping Inventory was assessed in two ways. Table I shows the inter-observer reliability coefficients for four independent observers rating 56 children, ages 3 to 5, 37 in typical nursery programs and 19 in preschool programs for handicapped children.

Insert Table I

Table II shows the split half reliability coefficients (odd-even items) on a sample of 103 children, aged 3 to 5, (59 typical children in regular preschool programs and 44 handicapped children in special programs).

The standard error of measure for the typical group is .099 and for the handicapped group is .083.

Insert Table II

In Table III the scores of this sample of handicapped and non-handicapped children were compared. There were significant differences (.001) in every category and dimensions of coping behavior. The mean Adaptive Behavior Index of the typical sample is 4.05 which reinforces the criteria of 4 for functional coping competence.

Figure 1

COPING INVENTORY

CHILD'S NAME Billy C.A. 5 years, 5 months

Coping With Self	Raw Score	No. Scoreable Items	Converted Score
PRODUCTIVE	38	12	3.17
ACTIVE	17	6	2.83
FLEXIBLE	14	6	2.33
		TOTAL	8.33
		SELF SCORE	2.78

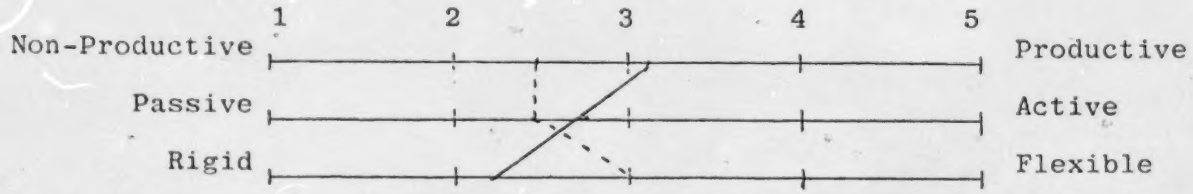
Coping With Environment	Raw Score	No. Scoreable Items	Converted Score
PRODUCTIVE	30	12	2.5
ACTIVE	15	6	2.5
FLEXIBLE	18	6	3.0
		TOTAL	8.0
		ENVIRONMENT SCORE	2.67

Env.-----
Self____

Sum of SELF SCORE and ENVIRONMENT SCORE 5.45

ADAPTIVE BEHAVIOR INDEX 2.73

COPING PROFILE



Most Adaptive Behaviors

Cat.	Dim.	Rat.	
S	P	4	Generally has a happy feeling.
S	P	4	Able to handle anxiety.
S	A	4	Asks for help when needed.

Least Adaptive Behaviors

Cat.	Dim.	Rat.	
S	A	1	Does not stay with task until completed.
S	F	2	Does not see relationships in new ways.
S	F	2	Does not shift plans or change behavior.
S	F	2	Does not accept substitutes when necessary.
S	F	2	Does not demonstrate independence & self reliance.
E	P	2	Does not play with other children.
E	P	2	Does not understand directions.
E	P	2	Does not resist discouragement.
E	P	2	Not aware of feelings of others.
E	P	2	Does not function with minimal amoun of external structure.
E	P	2	Not aware of and does not react to cues and moods of other people.
E	A	2	Does not use gross & fine motor skills competently.
E	A	2	Not stimulating to others.
E	A	2	Activity level not appropriate to situation.
E	F	2	Does not use range of strategies.

Figure 2

COPING INVENTORY

CHILD'S NAME Tom C.A. 10 years, 10 months

Coping With Self	Raw Score	No. Scoreable Items	Converted Score
PRODUCTIVE	25	12	2.1
ACTIVE	15	6	2.5
FLEXIBLE	13	6	2.2
		TOTAL	2.3
		SELF SCORE	2.3

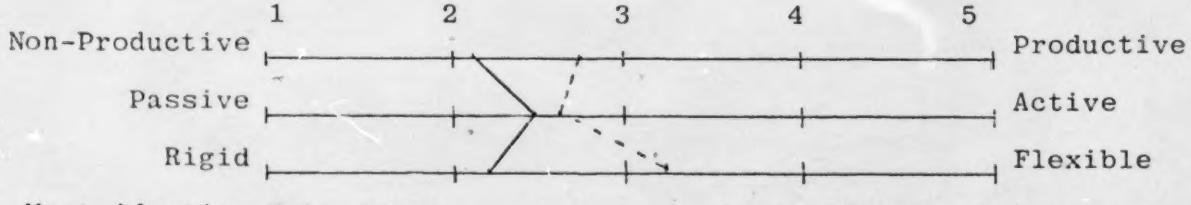
Coping With Environment	Raw Score	No. Scoreable Items	Converted Score
PRODUCTIVE	34	12	2.8
ACTIVE	16	6	2.7
FLEXIBLE	20	6	3.3
		TOTAL	8.8
		ENVIRONMENT SCORE	2.9

Env. -----
Self _____

Sum of SELF SCORE and ENVIRONMENT SCORE 5.2

ADAPTIVE BEHAVIOR INDEX 2.6

COPING PROFILE



Most Adaptive Behaviors

Cat.	Dim.	Rat.	
E	F	5	Enjoys newness and discovery.
E	P	5	Understands directions.
E	P	5	Is curious.
E	P	5	Is liked and accepted by peers.
S	P	4	Uses cognitive resources effectively.

Least Adaptive Behaviors

Cat.	Dim.	Rat.	
S	P	1	Does not use self protecting devices
S	P	1	Does not apply what he has learned in new situations.
S	P	1	Does not have a high threshold for frustration.
S	P	1	Is not able to handle anxiety.
S	A	1	Does not communicate to others disagreement & feelings of anger
S	A	1	Demonstrates impulsiveness which interferes with learning.
S	F	1	Does not accept substitutes when necessary.
S	F	1	Does not deal with feelings of frustration or stress in an adaptive way.
E	P	1	Does not resist discouragment.
E	P	1	Is not aware of feelings of others.
E	P	1	Does not function with minimal amount of external structure.
E	A	1	Does not have a positive orientation to life.

TABLE I

Inter-Observer Reliability Coefficients for Coping Inventory

	(N=56) Total Group	(N=19) Handicapped	(N=37) Normal
Self-Productive	.916	.972	.802
Env.-Productive	.945	.976	.872
Self-Active	.932	.967	.805
Env.-Active	.922	.945	.843
Self-Flexible	.939	.980	.837
Env.-Flexible	.838	.957	.781
Productive	.948	.982	.875
Active	.954	.974	.884
Flexible	.918	.982	.849
Self	.948	.985	.858
Environment	.946	.981	.891
Adaptive Behavior Index	.957	.988	.895

TABLE II

Split-Half Reliability for Coping Inventory
(Odd-Even Items)

	$\bar{x}_1$	s_1	$\bar{x}_2$	s_2	r_{TT}
Total Group (N=103)	3.61	0.81	3.61	0.85	.987
Handicapped Group (N=44)	3.05	0.79	2.98	0.80	.989
Non-Handicapped Group (N=59)	4.02	0.52	4.07	0.53	.965

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Insert Table III

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The ten items in the Coping Inventory in which there was the greatest difference between the handicapped and the non-handicapped children are shown in Table IV.

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Insert Table IV

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The usefulness of the Inventory as a tool for educational planning has been documented in the Validation Study (1978) of the PIE program (Preschool Instruction for the Exceptional) a Title IV C project based on the hypothesis that the more effectively a child copes the more effectively he learns. First year data supported the hypothesis with statistically significant data in all areas of development. Informal support has come from the number of schools using the Coping Inventory as part of their development of Individualized Educational Programs.

The initial data comparing the Coping Inventory scores of the handicapped and non-handicapped groups support the need for handicapped children to learn more adaptive coping behavior.

Replication of the initial statistical studies with a larger and more varied population has to be done.

TABLE III

Comparison of Handicapped and Non-Handicapped Groups on Coping Inventory

Overall Score and Sub-Scores

		Adaptive Coping Index	Self	Environment	Productive	Active	Flexible	Self Productive	Environment Productive	Self Active	Environment Active	Self Flexible	Environment Flexible
Handicapped	$\bar{x}$	3.01	2.94	3.09	3.07	3.01	2.91	2.98	3.16	3.02	3.00	2.78	3.04
(N=44)	s	0.79	0.83	0.78	0.84	0.79	0.77	0.86	0.86	0.85	0.83	0.89	0.69
Non-Handicapped (N=59)	$\bar{x}$	4.05	4.05	4.05	4.10	4.04	3.93	4.11	4.10	4.05	4.03	3.92	3.95
	s	0.53	0.55	0.54	0.54	0.54	0.58	0.57	0.57	0.57	0.58	0.63	0.59
	t	7.55*	7.70*	7.02*	7.12*	7.45*	7.36*	7.57*	6.30*	6.95*	7.04*	7.25*	7.04
	p	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001

*Cochran-Cox Correction Applied

TABLE IV

Coping Behaviors that Most Differentiate

Handicapped Young Children from Typical Young Children

Score Diff.	Category	Dimension	
1.64	E	P	1. Child functions with minimal amount of external structure.
1.31	E	F	2. Child when necessary, uses a range of strategies to achieve a goal or solve a problem.
1.19	E	P	3. Child resists discouragement.
1.77	S	P	4. Child appropriately uses language to express his needs.
1.24	S	F	5. Child can shift plans or change behavior to achieve a goal.
1.34	S	F	6. Child sees relationships in new ways, etc.
1.21	S	P	7. Child uses cognitive resources effectively.
1.19	E	A	8. Child uses gross and fine motor skills competently.
1.17	S	P	9. Child has confidence in his ability to do.
1.28	E	A	10. Child is stimulating to others.

The use of the Coping Inventory as a measure of adaptive behavior is the first step to actively helping children cope more effectively and, thereby, increase their ability to handle life's daily routines and stresses.

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